

PATENT
514413-3802.1

AMENDMENT TO THE CLAIMS

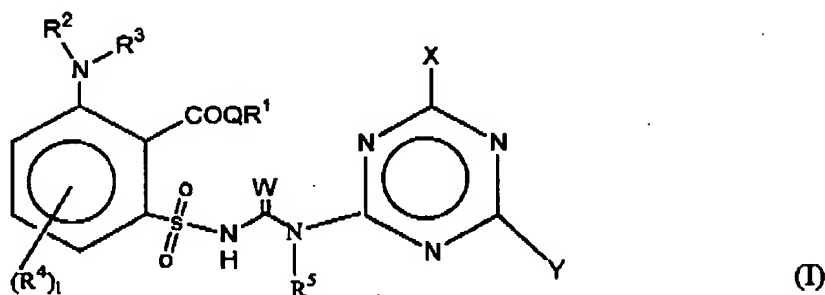
Please enter the following amendments to the claims without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents as follows:

In the Claims

Claims 1-22 (cancelled)

Claim 23 (Currently amended)

23. A compound of the formula (I) or a salt thereof



in which

R^1 is H, (C₁-C₆)alkyl, (C₃-C₆)alkenyl, (C₃-C₆)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, unsubstituted and substituted phenyl, unsubstituted and substituted heterocyclyl, unsubstituted and substituted (C₃-C₆)cycloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, [(C₁-C₄)alkoxy]carbonyl and [(C₁-C₄)haloalkoxy]carbonyl, or is unsubstituted or substituted (C₃-C₆)cycloalkyl, substituted or unsubstituted (C₃-C₆)cycloalkenyl, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl having 3 to 6 ring atoms, where substituted phenyl, substituted heterocyclyl, substituted cycloalkyl or substituted cycloalkenyl carry, as substituents, one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)alkyl, di[(C₁-C₄)alkoxy](C₁-C₄)alkyl, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)haloalkylsulfinyl,

PATENT
514413-3802.1

(C₁-C₄)alkylsulfonyl, (C₁-C₄)haloalkylsulfonyl, NR⁸R⁹, [(C₁-C₄)alkoxy]carbonyl, [(C₁-C₄)haloalkoxy]carbonyl, [(C₁-C₄)alkyl]carbonyl, OH, phenyl, CN and NO₂ and R² is a group of the formula R⁰-Q⁰-, in which R⁰ is a hydrogen atom, (C₁-C₁₂)alkyl, (C₂-C₁₂)alkenyl or (C₂-C₁₂)alkynyl, where each the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkoxy, (C₁-C₆)haloalkoxy, (C₁-C₆)alkylthio, (C₁-C₆)haloalkylthio, (C₁-C₆)alkylsulfinyl, (C₁-C₆)haloalkylsulfinyl, (C₁-C₆)alkylsulfonyl, (C₁-C₆)haloalkylsulfonyl, [(C₁-C₆)alkoxycarbonyl], [(C₁-C₆)haloalkoxy]carbonyl, CONR⁶R⁷, SO₂NR⁶R⁷, CN, OH, SH, (C₃-C₆)cycloalkyl, NR⁸R⁹, unsubstituted or substituted phenyl, and unsubstituted or substituted heterocyclyl, or

is (C₃-C₆)cycloalkyl, (C₃-C₆)cycloalkenyl, phenyl or heterocyclyl, where the four last-mentioned radicals may be unsubstituted or substituted, and

in which Q⁰ is a direct bond or a divalent group of the formula -O- or -N(R[#])-N(R[#]) where R[#] is a hydrogen atom, an acyl radical or (C₁-C₁₂)alkyl, (C₂-C₁₂)alkenyl or (C₂-C₁₂)alkynyl, where each of the 3 last-mentioned radicals is unsubstituted or substituted by one or more radicals ~~selected~~ selected from the group consisting of halogen, (C₁-C₆)alkoxy, (C₁-C₆)haloalkoxy, (C₁-C₆)alkylthio, (C₁-C₆)haloalkylthio, CN, OH, (C₃-C₆)cycloalkyl, unsubstituted or substituted phenyl, and unsubstituted or substituted heterocyclyl,

or is unsubstituted or substituted (C₃-C₆)cycloalkyl, unsubstituted or substituted (C₃-C₆)cycloalkenyl or unsubstituted or substituted phenyl, and R⁰ and R[#] together with the nitrogen atom of the NR[#] R⁰ group may form a heterocyclyl radical, having 3 to 6 ring atoms, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, [(C₁-C₆)alkoxy]carbonyl, (C₁-C₆)haloalkyl and oxo,

R³ is a hydrogen atom, (C₁-C₁₂)alkyl; (C₂-C₁₂)alkenyl or (C₂-C₁₂)alkynyl,

PATENT
514413-3802.1

where each of the 3 last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkoxy, (C₁-C₆)haloalkoxy, (C₁-C₆)alkylthio, (C₁-C₆)haloalkylthio, (C₁-C₆)alkylsulfinyl, (C₁-C₆)haloalkylsulfinyl, (C₁-C₆)alkylsulfonyl, (C₁-C₆)haloalkylsulfonyl, [(C₁-C₆)alkoxy]carbonyl, [(C₁-C₆)haloalkoxy]carbonyl, CONR⁶R⁷, SO₂NR⁶R⁷, CN, OH, (C₃-C₆)cycloalkyl, NR⁸R⁹, unsubstituted or substituted phenyl, and unsubstituted or substituted heterocyclyl, or

is unsubstituted or substituted (C₃-C₆)cycloalkyl, unsubstituted or substituted (C₃-C₆)cycloalkenyl, unsubstituted or substituted heterocyclyl, or unsubstituted or substituted phenyl, or and

R² and R³ together with the nitrogen atom of the NR²R³ group (N¹) ~~may form a~~ form a heterocyclyl radical, having 3 to 6 carbon ring atoms, which is unsubstituted or substituted and which one of the carbon atoms is optionally replaced by one heteroatom selected from the group consisting of N, O, and S, by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, [(C₁-C₆)alkoxy]carbonyl, (C₁-C₆)haloalkyl and oxo, where the oxo radical is not adjacent to the nitrogen atom (N¹), and

R⁴ independently of one another are halogen NH₂, NO₂, NHOH, NO, NH-NH₂, N₃, CN, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, (C₃-C₆)alkenyloxy, (C₃-C₆)alkynyloxy, where each of the 6 last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkoxy, (C₁-C₆)haloalkoxy, (C₁-C₆)alkylthio, (C₁-C₆)haloalkylthio, (C₁-C₆)alkylsulfinyl, (C₁-C₆)haloalkylsulfinyl, (C₁-C₆)alkylsulfonyl, (C₁-C₆)haloalkylsulfonyl, [(C₁-C₆)alkoxy]carbonyl, [(C₁-C₆)haloalkoxy]carbonyl, CONR⁶R⁷, SO₂NR⁶R⁷, CN, OH, (C₃-C₆)cycloalkyl, NR⁸R⁹, unsubstituted or substituted phenyl or unsubstituted or substituted heterocyclyl,

or

is unsubstituted or substituted (C₃-C₆)cycloalkyl, unsubstituted or substituted (C₃-C₆)cycloalkenyl, unsubstituted or substituted heterocyclyl, unsubstituted or

PATENT
514413-3802.1

substituted phenyl, [(C₁-C₄)alkyl]carbonyl or [(C₁-C₄)alkoxy]carbonyl, where each of the two last-mentioned radicals is unsubstituted or substituted in the alkyl moiety by one or more halogen atoms, or is a radical of the formula C(O)-NR'-R'', C(S)-NR'-R'', CR'=N-Q¹-R'', S(O)_m-Q¹-R''', P(O)_n(-Q¹-R'''Q²-R''), NR'-Q¹-R'' or NR'''-N=CR'-R'', where R', R'' and R''' independently of one another are a hydrogen atom, an acyl radical or an unsubstituted or substituted (C₁-C₁₀)hydrocarbon radical, R''' is a carbon-containing acyl radical or an unsubstituted or substituted (C₁-C₁₀)hydrocarbon radical, and Q¹ and Q² independently of one another are a direct bond or a divalent group of the formula -O- or -N(R⁺)-, where R⁺ is a hydrogen atom, an aryl radical, or an unsubstituted or substituted (C₁-C₁₀)hydrocarbon radical, and m = 0, 1, 2 or 3, and n = 0, 1 or 2, and R' together with R'', R⁺ together with R', R⁺ together with R'' or R⁺ together with R''' may in each case form a heterocyclyl radical having 3 to 6 carbon ring atoms which is unsubstituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, [(C₁-C₆)alkoxy]carbonyl, (C₁-C₆)haloalkyl and oxo,

1 is 0, 1 or 2;

R⁵ is H or (C₁-C₄)alkyl which is unsubstituted or substituted,

R⁶ and R⁷ independently of one another are H, (C₁-C₆)alkyl, (C₃-C₆)alkenyl, (C₃-C₆)alkynyl, unsubstituted or substituted phenyl or unsubstituted or substituted heterocyclyl or

R⁶ and R⁷ together with the nitrogen atom of the NR⁶R⁷ group may form a heterocyclyl radical having 5 or 6 carbon atoms which may optionally be replaced by one heteroatom selected from the group consisting of N, O and S and which is unsubstituted or mono- or polysubstituted by radicals selected from the group consisting of (C₁-C₄)alkyl and oxo, and

R⁸ and R⁹ independently of one another are (C₁-C₄)alkylcarbonyl, (C₁-C₄)haloalkylcarbonyl, (C₁-C₄)alkoxycarbonyl or (C₁-C₄)alkylsulfonyl or together with the nitrogen atom, of the NR⁸R⁹ group may form a heterocyclyl radical having 5 or 6 carbon ring atoms which may be optionally replaced by one additional heteroatom selected from the group

PATENT
514413-3802.1

consisting of N, O and S and which is unsubstituted or mono- or polysubstituted by radicals selected from the group consisting of (C₁-C₄)alkyl and oxo, and

Q is O, S or NR*,

R* is (C₁-C₄)alkyl, (C₃-C₄)alkenyl or (C₃-C₄)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkoxy and (C₁-C₄)alkylthio, and

R* and R¹ together with the nitrogen atom of the NR*R¹ group may form a heterocyclyl radical which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, [(C₁-C₆)alkoxy]carbonyl, (C₁-C₆)haloalkyl and oxo,

W is an oxygen atom or a sulfur atom,

X, Y independently of one another are H, halogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals from the group consisting of halogen, (C₁-C₄)alkoxy and (C₁-C₄)alkylthio, are mono- or di[(C₁-C₄)alkyl]amino, (C₃-C₅)alkenyl, (C₃-C₅)alkenyloxy, (C₃-C₅)alkynyl or (C₃-C₅)alkynyloxy, and where the radicals R¹, R², R³, and R⁴, including substituents, have up to 20 carbon atoms, and wherein, if not otherwise specified:

- heterocyclyl is a saturated or unsaturated ring having 3 to 7 ring atom or a heteroaromatic ring having 5 or 6 ring atoms, and wherein one of the ring atoms is a heteroatom selected from the group consisting of N, O, or S and the remaining ring atoms are carbon atoms or is a radical selected from the group consisting of pyrimidinyl, pyridazinyl, pyrazinyl, triazinyl, thiazolyl, oxazolyl, pyrazolyl, and imidazolyl, pyrrolidyl, piperidyl, piperazinyl, dioxolanyl, or morpholinyl;
- substituents for the (C₃-C₆)cycloalkyl, (C₃-C₆) cycloalkenyl, phenyl, or heterocyclic rings or the (C₁-C₁₀)hydrocarbon radical, unless otherwise specified are 1, 2, or 3 radicals selected from the group consisting of halogen, alkoxy, haloalkoxy, alkylthio, hydroxyl, amino, nitro, carboxyl, cyano, azido, alkoxycarbonyl, alkylcarbonyl, formyl, carbamoyl, mono- and dialkylaminocarbonyl, acylamino, NR⁵R⁹, mono-, and dialkylamino, and

PATENT
514413-3802.1

alkylsulfinyl, haloalkylsulfinyl, alkylsulfonyl, haloalkylsulfonyl, alkyl and haloalkyl alkenyl, alkynyl, alkenyloxy, alkynyloxy, and phenyl which is optionally substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄) alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, [(C₁-C₄)alkoxy]carbonyl, [(C₁-C₄)alkyl]carbonyl, NR⁸R⁹, phenyl, CN and NO₂.

Claim 24 (previously presented)

24. The compound of the formula (I) or salt thereof according to claim 23, in which

R¹ is (C₁-C₆)alkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen and (C₁-C₄)alkoxy, or is 3-oxetanyl, (C₃-C₄)alkenyl or (C₃-C₄)alkynyl,

R² is H, (C₁-C₆)alkyl, (C₃-C₆)alkenyl, (C₃-C₆)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfonyl, [(C₁-C₄)alkoxy]carbonyl, (C₃-C₆)cycloalkyl, CN and OH, or is (C₃-C₆)cycloalkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, [(C₁-C₄)alkoxy]carbonyl, CN and OH, or is (C₃-C₆)cycloalkenyl, (C₁-C₄)alkoxy, (C₁-C₄)alkenyloxy, (C₁-C₄)alkylamino or di[(C₁-C₄)alkyl]amino and

R³ is H, (C₁-C₆)alkyl, (C₃-C₆)alkenyl, (C₃-C₆)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfonyl, [(C₁-C₄)alkoxy]carbonyl; (C₃-C₆)cycloalkyl, CN and OH, or is (C₃-C₆)cycloalkyl which is unsubstituted or-substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, [(C₁-C₄)alkoxy]carbonyl, CN and OH, or is (C₃-C₆)cycloalkenyl or

PATENT
514413-3802.1

- R^2 and R^3 together with the nitrogen atom (N^1) may form a heterocyclyl of 3 to 6 carbon ring and which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_6) alkyl, (C_1-C_6) alkoxy, $[(C_1-C_3)$ alkoxy]carbonyl and oxo, where the oxo radical is not adjacent to the nitrogen atom (N^1), and
- R^4 are (C_1-C_4) alkyl, (C_1-C_4) haloalkyl, (C_1-C_4) alkoxy or halogen, NH_2 , NO_2 , $NHOH$, NO , $NH-NH_2$ or NH_3
- l is 0 or 1,
- R^5 is H or C_1-C_4 alkyl,
- Q is O or NR^* ,
- R^* is H or (C_1-C_4) alkyl, (C_3-C_4) alkenyl, or (C_3-C_4) alkynyl
- X and Y independently of one another are (C_1-C_4) alkyl, (C_1-C_4) alkoxy, where each of the two last-mentioned radicals is unsubstituted or substituted by one or more halogen atoms, or are (C_1-C_4) alkylthio, halogen or mono- or di $[(C_1-C_2)$ alkyl]amino, and
- W is an oxygen atom or a sulfur atom.

Claim 25 (previously presented)

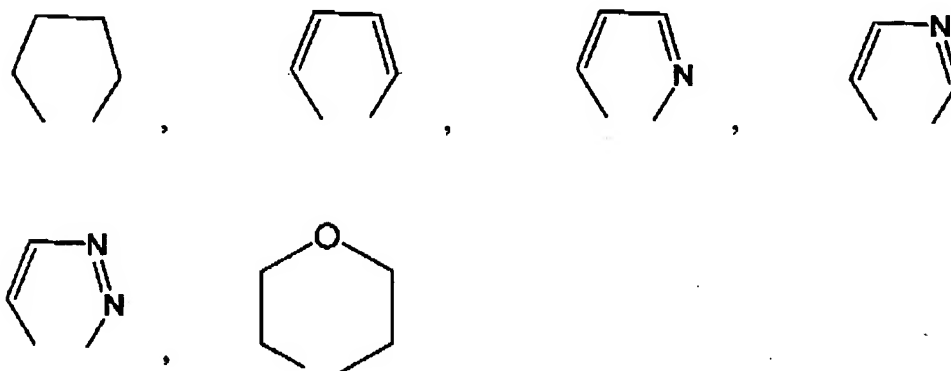
25. A compound or salt thereof according to claim 23 wherein

- R^1 is (C_1-C_6) alkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen and (C_1-C_4) alkoxy, or is 3-oxetanyl, (C_3-C_4) alkenyl or (C_3-C_4) alkynyl,
- R^2 is H, (C_1-C_6) alkyl, (C_3-C_6) alkenyl, (C_3-C_6) alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4) alkoxy, (C_1-C_4) alkylthio, (C_1-C_4) alkylsulfonyl, $[(C_1-C_4)$ alkoxy]carbonyl, (C_3-C_6) cycloalkyl, CN and OH, or is (C_3-C_6) cycloalkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4) alkyl, (C_1-C_4) alkoxy, $[(C_1-C_4)$ alkoxy]carbonyl, CN and OH, or is (C_3-C_6) cydoalkenyl, (C_1-C_4) alkoxy, (C_1-C_4) alkenyloxy, (C_1-C_4) alkylamino or di $[(C_1-C_4)$ alkyl]amino and
- R^3 is H, (C_1-C_6) alkyl, (C_3-C_6) alkenyl, (C_3-C_6) alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals

PATENT
514413-3802.1

selected from the group consisting of halogen, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfonyl, [(C₁-C₄)alkoxy]carbonyl, (C₃-C₆)cycloalkyl, CN and OH, or is (C₃-C₆)cycloalkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, [(C₁-C₄)alkoxy]carbonyl, CN and OH, or is (C₃-C₆)cycloalkenyl or

R² and R³ together with the nitrogen atom (N¹) may form heterocyclic ring of the formulae:



unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkyl, (C₁-C₃)alkoxy, [(C₁-C₃)alkoxy]carbonyl and oxo, and

R⁴ are (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy or halogen,

l is 0 or 1,

R⁵ is H or methyl,

Q is O,

X and Y independently of one another are (C₁-C₄)alkyl, (C₁-C₄)alkoxy, where each of the two last-mentioned radicals is unsubstituted or substituted by one or more halogen atoms, or are (C₁-C₄)alkylthio, halogen or mono- or di[(C₁-C₂)alkyl]amino, and

W is an oxygen atom.

Claim 26 (previously presented)

PATENT
514413-3802.1

26. A compound of the formula (I) or a salt thereof as claimed in claim 23 in which

R^1 is H, (C₁-C₆)alkyl, (C₃-C₆)alkenyl or (C₃-C₆)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, phenyl, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, (C₃-C₆)cycloalkyl or heterocyclyl having 3 to 6 ring atoms and [(C₁-C₄)alkoxy]carbonyl, or is (C₃-C₆)cycloalkyl, heterocyclyl having 3 to 6 ring atoms, where each of the two last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl and (C₁-C₄)alkoxy,

R^2 is a group of the formula R^0-Q^0 in which

R^0 is a hydrogen atom, (C₁-C₈)alkyl, (C₃-C₈)alkenyl or (C₃-C₈)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)haloalkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)haloalkylsulfinyl, (C₁-C₄)alkylsulfonyl, (C₁-C₄)haloalkylsulfonyl, [(C₁-C₆)alkoxy]carbonyl, CONR⁶R⁷, SO₂NR⁶R⁷, CN, OH, (C₃-C₆)cycloalkyl, NR⁸R⁹ and phenyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, NR⁸R⁹, [(C₁-C₄)alkoxy]carbonyl, [(C₁-C₄)alkyl]carbonyl, phenyl [(C₁-C₄)alkyl]carbonyl, CN and NO₂, or

is heterocyclyl having 3 to 6 ring atoms which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, NR⁸R⁹, [(C₁-C₄)alkoxy]carbonyl, [(C₁-C₄)alkyl]carbonyl, phenyl, CN and NO₂, or is (C₃-C₆)cycloalkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, [(C₁-C₄)alkoxy]carbonyl, CN, OH and phenyl, or

is (C₃-C₆)cycloalkenyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy and [(C₁-C₄)alkoxy]carbonyl, or is phenyl which is unsubstituted or

PATENT
514413-3802.1

substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, NR⁸R⁹, [(C₁-C₄)alkoxy]carbonyl, [(C₁-C₄)alkyl]carbonyl, phenyl, CN and NO₂, and

Q⁰ is a direct bond or a divalent group of the formula -O- or -NR[#], in which R[#] is a hydrogen atom or unsubstituted or substituted (C₁-C₄)alkyl,

R³ is a hydrogen atom, (C₁-C₈)alkyl, (C₃-C₈)alkenyl or (C₃-C₈)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)haloalkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)haloalkylsulfinyl, (C₁-C₄)alkylsulfonyl, (C₁-C₄)haloalkylsulfonyl, [(C₁-C₆)alkoxy]carbonyl, CONR⁶R⁷, SO₂NR⁶R⁷, CN, OH, (C₃-C₆)cycloalkyl, NR⁸R⁹ and phenyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, NR⁸R⁹, [(C₁-C₄)alkoxy]carbonyl, [(C₁-C₄)alkyl]carbonyl, phenyl, [(C₁-C₄)alkyl]carbonyl, CN and NO₂, or is heterocyclyl having 3 to 6 ring atoms which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, NR⁸R⁹, [(C₁-C₄)alkoxy]carbonyl, [(C₁-C₄)alkyl]carbonyl, phenyl, CN and NO₂, or is (C₃-C₆)cycloalkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, [(C₁-C₄)alkoxy]carbonyl, CN, OH and phenyl, or is (C₃-C₆)cycloalkenyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, and [(C₁-C₄)alkoxy]carbonyl, or is phenyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, NR⁸R⁹, [(C₁-C₄)alkoxy]carbonyl, [(C₁-C₄)alkyl]carbonyl, phenyl, CN and NO₂, and

R⁴ are halogen, CN, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl

PATENT
514413-3802.1

(C₃-C₆)alkenyloxy, (C₃-C₆)alkynyloxy,

where each of the 6 last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)alkoxy, (C₁-C₆)haloalkoxy, (C₁-C₆)alkylthio, (C₁-C₆)haloalkylthio, (C₁-C₆)alkylsulfinyl, (C₁-C₆)haloalkylsulfinyl, (C₁-C₆)alkylsulfonyl, (C₁-C₆)haloalkylsulfonyl, [(C₁-C₆)alkoxy]carbonyl, [(C₁-C₆)haloalkoxy]carbonyl, CONR⁶R⁷, SO₂NR⁶R⁷, CN, OH, (C₃-C₆)cycloalkyl, NR⁸R⁹, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl or are unsubstituted or substituted (C₃-C₆)cycloalkyl, unsubstituted or substituted (C₃-C₆)cycloalkenyl, unsubstituted or substituted heterocyclyl having 3 to 6 ring atoms, unsubstituted or substituted phenyl or [(C₁-C₄)alkyl]carbonyl or [(C₁-C₄)alkoxy]carbonyl, where each of the two last-mentioned radicals is unsubstituted or substituted in the alkyl moiety by one or more halogen atoms or are radicals of the formula C(O)-NR'-R'', C(S)-NR'-R'', CR'=N-Q¹-R'', NR'-Q¹-R'' or NR'''-N=CR'-R'' where R', R'' and R''' independently of one another are a hydrogen atom, an acyl radical or an unsubstituted or substituted (C₁-C₁₀)hydrocarbon radical, and Q¹ and Q² independently of one another are a direct bond or a divalent group of the formula -O- or -N(R⁺)-, where R⁺ is a hydrogen atom, an acyl radical or an unsubstituted or substituted (C₁-C₄)alkyl radical and R' together with R'' or R⁺ together with R' or R⁺ together with R'' may in each case form a heterocyclyl radical having 3 to 6 ring atoms which is unsubstituted or substituted,

1 is 0 or 1,

R⁶ and R⁷ independently of one another are H, (C₁-C₄)alkyl, (C₃-C₄)alkenyl, (C₃-C₄)alkynyl or phenyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)haloalkyl, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfonyl, [(C₁-C₄)alkoxy]carbonyl, CN and NO₂, or

R⁶ and R⁷ together with the nitrogen atom of the NR⁶R⁷ group may form a heterocyclyl radical having 5 to 6 ring members which may be replaced by one heteroatom selected from the group consisting of N, O, and S and which is unsubstituted or mono- or polysubstituted by radicals selected from the group consisting of (C₁-C₄)alkyl and oxo,

R⁸ and R⁹ are (C₁-C₄)alkylcarbonyl, (C₁-C₄)haloalkylcarbonyl, (C₁-C₄)alkoxycarbonyl or

PATENT
514413-3802.1

(C₁-C₄)alkylsulfonyl, or together with the nitrogen atom of the NR⁸R⁹ group may form a heterocyclyl radical having 5 to 6 ring members which may contain one heteroatom selected from the group consisting of N, O, and S and which is unsubstituted or mono- or polysubstituted by radicals selected from the group consisting of (C₁-C₄)alkyl and oxo.

Claim 27 (previously presented)

27. A compound of the formula (I) or a salt thereof as claimed in claim 23 in which

R¹ is (C₁-C₆)alkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen and (C₁-C₄)alkoxy, or is 3-oxetanyl, (C₃-C₄)alkenyl or (C₃-C₄)alkynyl,

R² is H, (C₁-C₆)alkyl, (C₃-C₆)alkenyl, (C₃-C₆)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfonyl, [(C₁-C₄)alkoxy]carbonyl, (C₃-C₆)cycloalkyl, CN and OH, or is (C₃-C₆)cycloalkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, [(C₁-C₄)alkoxy]carbonyl, CN and OH, or is (C₃-C₆)cycloalkenyl, (C₁-C₄)alkoxy, (C₁-C₄)alkenyloxy, (C₁-C₄)alkylamino or di[(C₁-C₄)alkyl]amino and

R³ is H, (C₁-C₆)alkyl, (C₃-C₆)alkenyl, (C₃-C₆)alkynyl, where each of the three last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, (C₁-C₄)alkylsulfonyl, [(C₁-C₄)alkoxy]carbonyl, (C₃-C₆)cycloalkyl, CN and OH, or is (C₃-C₆)cycloalkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, [(C₁-C₄)alkoxy]carbonyl, CN and OH, or is (C₃-C₆)cycloalkenyl or

PATENT
514413-3802.1

R^2 and R^3 together with the nitrogen atom (N^1) may form a heterocyclyl of 3 to 6 carbon ring atoms which contain one heteroatom selected from the group consisting of N, O, and S and which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_6) alkyl, (C_1-C_3) alkoxy, $[(C_1-C_3)$ alkoxy]carbonyl and oxo, R^4 are (C_1-C_4) alkyl, (C_1-C_4) haloalkyl, (C_1-C_4) alkoxy or halogen, l is 0 or 1, R^5 is H or methyl, Q is O or NR^* , R^* is H or (C_1-C_4) alkyl, X and Y independently of one another are (C_1-C_4) alkyl, (C_1-C_4) alkoxy, where each of the two last-mentioned radicals is unsubstituted or substituted by one or more halogen atoms, or are (C_1-C_4) alkylthio, halogen or mono- or di $[(C_1-C_2)$ alkyl]amino, and W is an oxygen atom.

Claim 28 (previously presented)

28. A compound of the formula (I) or a salt thereof as claimed in claim 23 in which

 R^1 is (C_1-C_3) alkyl, allyl, or propargyl, R^2 is H, (C_1-C_4) alkyl, (C_3-C_5) alkenyl, (C_3-C_5) alkynyl, (C_3-C_6) cycloalkyl or (C_3-C_6) cycloalkenyl, or R^3 is H, (C_1-C_4) alkyl, (C_3-C_5) alkenyl, (C_3-C_5) alkynyl, (C_3-C_6) cycloalkyl or (C_3-C_6) cycloalkenyl, or

R^2 and R^3 together with the nitrogen atom (N^1) may form a heterocyclyl of 3 to 6 ring carbon atoms in which one of the carbon atoms is optionally replaced by one heteroatom selected from the group consisting of N, O, and S and which is unsubstituted or substituted by one or more (C_1-C_6) alkyl radicals,

 R^4 are (C_1-C_3) alkyl or halogen, l is 0 or 1, Q is O or NR^* , R^* is (C_1-C_3) alkyl,

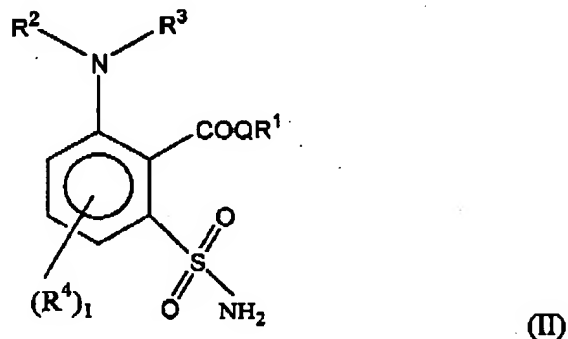
PATENT
514413-3802.1

- X is (C₁-C₂)alkyl, (C₁-C₂)alkoxy, (C₁-C₂)alkylthio, (C₁-C₂)haloalkyl or (C₁-C₂)haloalkoxy,
Y is (C₁-C₂)alkyl, (C₁-C₂)alkoxy, halogen, NHCH₃ or N(CH₃)₂.

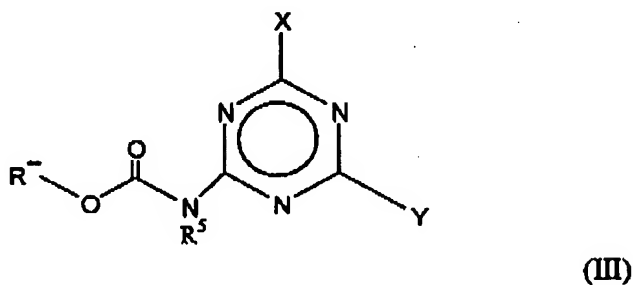
Claim 29 (currently amended)

29. A process for preparing compounds of the formula (I) or salts thereof as defined in claim 23 which comprises

- a) reacting a compound of the formula (II)



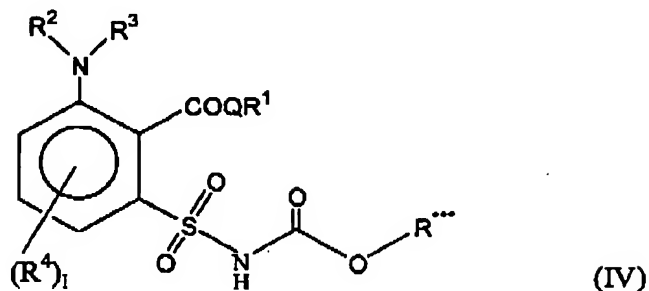
with a heterocyclic carbamate of the formula (III),



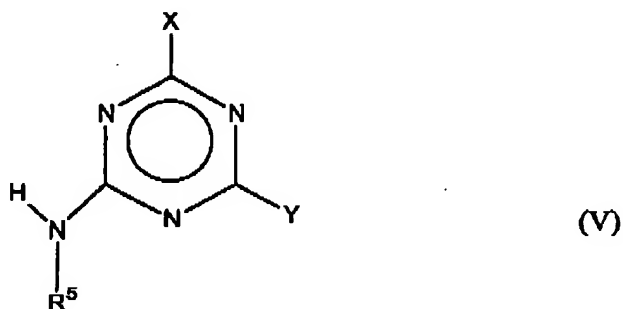
in which R^{**} is a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical, or

PATENT
514413-3802.1

- b) reacting a sulfonylcarbamate of the formula (IV),

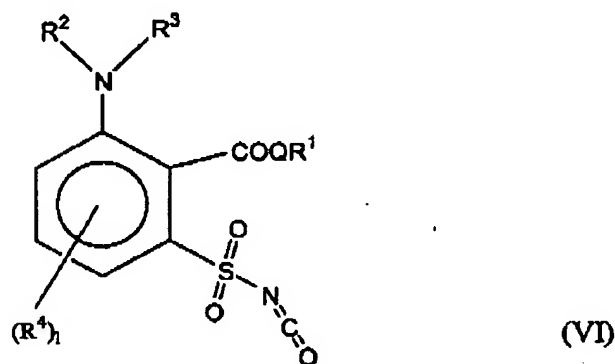


in which R³ is a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical with an amino heterocycle of the formula (V)



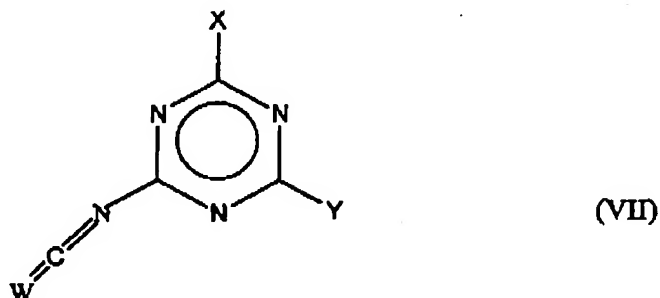
or

- c) reacting a sulfonyl isocyanate of the formula (VI)

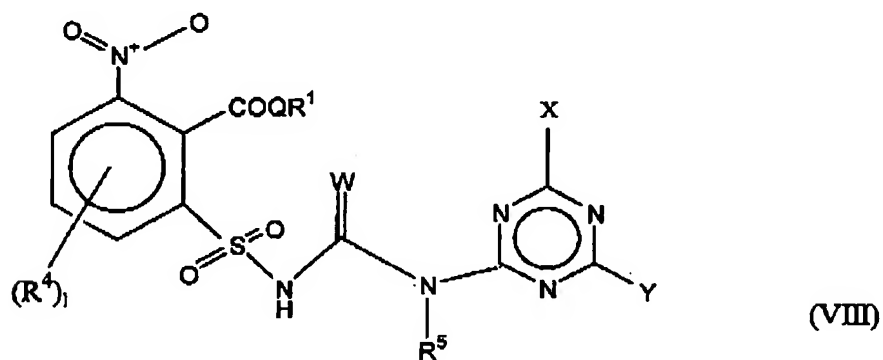


PATENT
514413-3802.1

- with an amino heterocycle of the formula (V) or
- d) reacting a sulfonamide of the formula (II) with a (thio)isocyanate of the formula (VII)



- in the presence of a base or
- d) reacting an amino heterocycle of the formula (V) initially under base catalysis with a carbonic ester and reacting the resulting intermediate in a one-pot reaction with a sulfonamide of the formula (II) (see variant a), or
- f) reacting a phenylsulfonyl urea of the formula (VIII)



PATENT
514413-3802.1

by the reduction of the nitro group and, if appropriate, further conversion of the hydroxylamine or amine function that is released to give the sulfonyl urea of the formula (I),

wherein the formulae (II) to (VIII) the radicals, groups and indices R^1 , R^5 , Q, V, W, X, Y, Z, and l are as defined in formula (I) of the claim 23.

Claim 30 (previously presented)

30. A herbicidal plant-growth regulating composition comprising a) one or more compounds of the formula I or a salt thereof as claimed in claim 23, and b) formulation auxiliaries which are customary in crop protection.

Claim 31 (previously presented)

31. A method for controlling harmful plants or for regulating the growth of plants, which comprises applying an effective amount of one or more compounds of the formula (I) or a salt thereof as claimed in claim 23 to the harmful plants or plants, to their plant seeds or to the area on which they grow.

Claim 32 (previously presented)

32. The compound of claim 23, wherein:

R^1 is H, methyl, ethyl, i-propyl, allyl, or 3-oxetanyl;

R^4 is methyl, fluoro, chloro, methoxy, or NO_2 ;

l is 0 or 1;

R^5 is H or methyl;

Q is oxygen;

W is oxygen; and

X, Y independently of one another are methyl, CF_3 , methoxy, ethoxy, $-\text{NHMe}$, $-\text{N}(\text{Me})_2$, or $-\text{OCH}_2\text{CF}_3$,

Claim 33 (previously presented)

33. The compound of claim 32, wherein

PATENT
514413-3802.1

R^2 is a group of the formula R^0-Q^0 , in which R^0 is a hydrogen atom and Q^0 is a direct bond; and

R^3 is a hydrogen atom or (C_1-C_{12}) alkyl.